```
=> d his

     (FILE 'HOME' ENTERED AT 03:49:07 ON 01 JUL 2002)

     FILE 'REGISTRY' ENTERED AT 03:49:14 ON 01 JUL 2002
L1                STRUCTURE UPLOADED
L2             1 S L1
L3            79 S L1 FULL

     FILE 'HCAPLUS' ENTERED AT 03:49:50 ON 01 JUL 2002
L4            43 S L3
L5            25 S L4 AND PD < MAY 1998
L6             5 S L4 AND READ, R?/AU
L7            24 S L5 NOT L6

     FILE 'CAOLD' ENTERED AT 03:51:30 ON 01 JUL 2002

=> s l3

L8             0 L3
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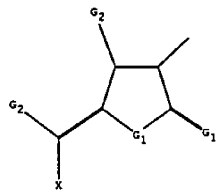

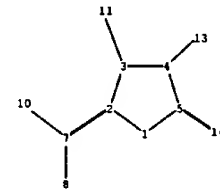

chain nodes :
7 8 10 11 13 14
ring nodes :
1 2 3 4 5
chain bonds :
2-7 3-11 4-13 5-14 7-8 7-10
ring bonds :
1-2 1-5 2-3 3-4 4-5
exact/norm bonds :
1-2 1-5 2-3 2-7 3-4 3-11 4-5 4-13 5-14 7-8 7-10
isolated ring systems :
containing 1 :

G1:O,S

G2:X,H

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 7:CLASS 8:CLASS 10:CLASS 11:CLASS 13:CLASS
14:Atom

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1612BXR

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2	Jan 25	BLAST(R) searching in REGISTRY available in STN on the Web
NEWS 3	Jan 29	FSTA has been reloaded and moves to weekly updates
NEWS 4	Feb 01	DKILIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS 5	Feb 19	Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6	Mar 08	Gene Names now available in BIOSIS
NEWS 7	Mar 22	TOXLIT no longer available
NEWS 8	Mar 22	TRCTHERMO no longer available
NEWS 9	Mar 28	US Provisional Priorities searched with P in CA/CAplus and USPATFULL
NEWS 10	Mar 28	LIPINSKI/CALC added for property searching in REGISTRY
NEWS 11	Apr 02	PAPERCHEM no longer available on STN. Use PAPERCHEM2 instead.
NEWS 12	Apr 08	"Ask CAS" for self-help around the clock
NEWS 13	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 14	Apr 09	ZDB will be removed from STN
NEWS 15	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 16	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 17	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 18	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 19	Jun 03	New e-mail delivery for search results now available
NEWS 20	Jun 10	MEDLINE Reload
NEWS 21	Jun 10	PCTFULL has been reloaded

NEWS EXPRESS	February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 03:49:07 ON 01 JUL 2002

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 03:49:14 ON 01 JUL 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

STRUCTURE FILE UPDATES: 28 JUN 2002 HIGHEST RN 435268-39-6
DICTIONARY FILE UPDATES: 28 JUN 2002 HIGHEST RN 435268-39-6

TSCA INFORMATION NOW CURRENT THROUGH January 7, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

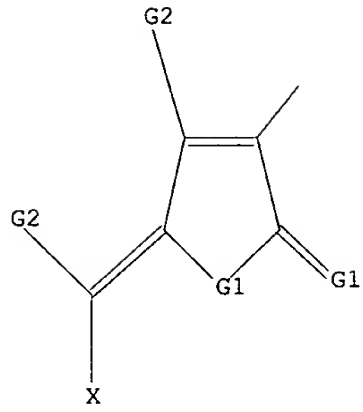
Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=>
Uploading 09673305.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS
L1 STR



G1 O,S

G2 X,H

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 03:49:39 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 147 TO ITERATE

100.0% PROCESSED 147 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2213 TO 3667
PROJECTED ANSWERS: 1 TO 80

L2 1 SEA SSS SAM L1

=> s l1 full

THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 139.90 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y

FULL SEARCH INITIATED 03:49:45 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3462 TO ITERATE

100.0% PROCESSED 3462 ITERATIONS 79 ANSWERS
SEARCH TIME: 00.00.02

L3 79 SEA SSS FUL L1

=> file hcaplus

COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

FULL ESTIMATED COST 140.28 140.49

FILE 'HCAPLUS' ENTERED AT 03:49:50 ON 01 JUL 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 1 Jul 2002 VOL 137 ISS 1
FILE LAST UPDATED: 30 Jun 2002 (20020630/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

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=> s l3

L4          43 L3

=> s l4 and pd < may 1998

      18832374 PD < MAY 1998
                 (PD<19980500)
L5          25 L4 AND PD < MAY 1998

=> s l4 and read, r?/au

           394 READ, R?/AU
L6           5 L4 AND READ, R?/AU

=> d l6, ibib abs fhitstr, 1-5


L6   ANSWER 1 OF 5  HCAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:        2002:10458  HCAPLUS
DOCUMENT NUMBER:         136:69697
TITLE:                   Preparation and antimicrobial activity of fimbrolides
INVENTOR(S):             Kumar, Naresh; Read, Roger Wayne
PATENT ASSIGNEE(S):      Unisearch Limited, Australia
SOURCE:                  PCT Int. Appl., 77 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
```
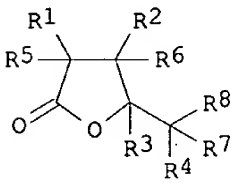

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

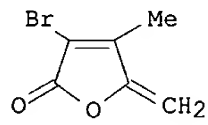
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002000639	A1	20020103	WO 2001-AU781	20010628

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: AU 2000-8419 A 20000628
OTHER SOURCE(S): CASREACT 136:69697; MARPAT 136:69697
GI



I

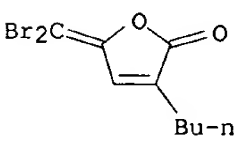


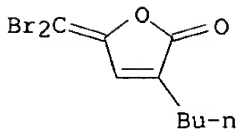
II

AB Fimbrolides, such as I [R1 = H, halogen, alkyl; R2 = alkyl, alkoxy, oxoalkyl, alkenyl, aryl, arylalkyl; R3 = H, OH, halogen, alkoxy; R4, R8 = H, halogen; R7 = H; R5, R6 = H, halogen; R3R7 = bond; R5R6 = bond], were prepd. for use as antibacterial and fungicidal agents. Thus, furanone II was prepd. in a four step synthetic sequence, which included condensation of OHCCO2H with MeCOCH2Me to form MeCOC(Me):CHCO2H, bromination to form MeCOCBrMeCHBrCO2H, lactonization to form I (R1 = R2 = Br, R3R7 = bond, R4 = R5 = R8 = H, R6 = Me,), and dehydrobromination as the final step. The prepd. furanones were tested for their ability to inhibit biofilm formation by Pseudomonas aeruginosa and for antibacterial and fungicidal activity against Staphylococcus aureus and Candida albicans.

IT **174862-78-3P**
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and antimicrobial activity of fimbrolides)

RN 174862-78-3 HCAPLUS
CN 2(5H)-Furanone, 3-butyl-5-(dibromomethylene)- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:762818 HCAPLUS
DOCUMENT NUMBER: 135:308957
TITLE: Antimicrobial coatings containing furanones
INVENTOR(S): **Read, Roger**; Kumar, Naresh; Wilcox, Mark; Zhu, Hua; Griesser, Hans; Muir, Ben; Thissen, Helmut; Hughes, Tim
PATENT ASSIGNEE(S): Unisearch Limited, Australia
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001076594	A1	20011018	WO 2001-AU407	20010410

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

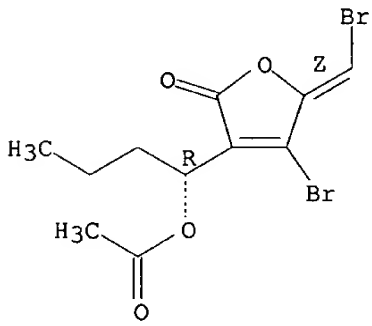
PRIORITY APPLN. INFO.: AU 2000-6812 A 20000410
OTHER SOURCE(S): MARPAT 135:308957

AB The present invention provides a substrate having a plurality of immobilized furanone moieties assocd. with at least part of a surface of the substrate. The substrate is selected from metals, ceramics, glasses, natural polymers, synthetic polymers, and natural materials, such as fibers, wool, hair, silk, cotton, collagen, etc. The invention also relates to articles consisting of or comprising such a substrate. For example, a furanone deriv. was immobilized onto amine poly(acrylic acid) and azidoaniline-coated polyfluorinated poly(ethylene-co-propylene) (Teflon FEP) showing a redn. of bacterial adhesion of 35% (initial adhesion) and 62% for biofilm formation.

IT **63025-21-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(furanones immobilization on biomaterials as antimicrobial coatings)

RN 63025-21-8 HCAPLUS
CN 2(5H)-Furanone, 3-[(1R)-1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:691095 HCAPLUS
DOCUMENT NUMBER: 131:296526
TITLE: Preparation of fimbrolide analog fouling inhibitors and bactericides
INVENTOR(S): **Read, Roger**; Kumar, Naresh
PATENT ASSIGNEE(S): Unisearch Limited, Australia
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9954323	A1	19991028	WO 1999-AU285	19990416
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RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2328364	AA	19991028	CA 1999-2328364	19990416
AU 9933225	A1	19991108	AU 1999-33225	19990416
EP 1071677	A1	20010131	EP 1999-914366	19990416
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

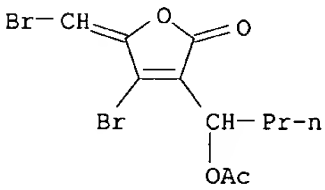
PRIORITY APPLN. INFO.: AU 1998-2978 A 19980416
WO 1999-AU285 W 19990416
OTHER SOURCE(S): CASREACT 131:296526; MARPAT 131:296526

AB The invention relates to the side chain functionalization of fimbrolides (halogenated 3-alkyl-5-methylene-2(5H)-furanones) and their synthetic analogs, that yields fimbrolides substituted with a halogen, an oxygen or a nitrogen functionality in the alkyl chain, esp. fimbrolide alcs., carboxylate and sulfinate and sulfonate esters, ethers, aldehydes, ketones, acids, amides, nitro derivs., hydrophobic, hydrophilic and fluorophilic alkyl derivs. and polymers (Markush given). The fimbrolide analogs are bactericides and marine fouling inhibitors.

IT **169274-84-4P**
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. as fimbrolide analog fouling inhibitor and bactericide)

RN 169274-84-4 HCAPLUS

CN 2(5H)-Furanone, 3-[1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:154230 HCAPLUS

DOCUMENT NUMBER: 130:348124

TITLE: Evidence that halogenated furanones from Delisea pulchra inhibit acylated homoserine lactone (AHL)-mediated gene expression by displacing the AHL signal from its receptor protein

AUTHOR(S): Manefield, Michael; De Nys, Rocky; Kumar, Naresh; **Read, Roger**; Givskov, Michael; Steinberg, Peter; Kjelleberg, Staffan

CORPORATE SOURCE: School of Microbiology and Immunology, University of New South Wales, Sydney, Australia

SOURCE: Microbiology (Reading, United Kingdom) (1999), 145(2), 283-291
CODEN: MROBEO; ISSN: 1350-0872

PUBLISHER: Society for General Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

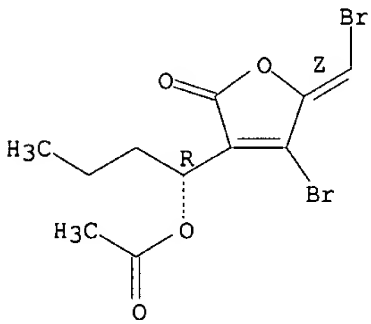
AB Acylated homoserine lactone (AHL)-mediated gene expression controls phenotypes involved in colonization, often specifically of higher organisms, in both marine and terrestrial environments. The marine red alga Delisea pulchra produces halogenated furanones which resemble AHLs structurally and show inhibitory activity at ecol. realistic concns. in AHL bioassays. Evidence is presented that halogenated furanones displace tritiated OHHL [N-3-(oxohexanoyl)-L-homoserine lactone] from Escherichia

coli cells overproducing LuxR with potencies corresponding to their resp. inhibitory activities in an AHL-regulated bioluminescence assay, indicating that this is the mechanism by which furanones inhibit AHL-dependent phenotypes. Alternative mechanisms for this phenomenon are also addressed. General metabolic disruption was assessed with two-dimensional PAGE, revealing limited non-AHL-related effects. A direct chem. interaction between the algal compds. and AHLs, as monitored by 1H NMR spectroscopy, was shown not to occur in vitro. These results support the contention that furanones, at the concns. produced by the alga, can control bacterial colonization of surfaces by specifically interfering with AHL-mediated gene expression at the level of the LuxR protein.

IT **63025-21-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(evidence that halogenated furanones from Delisea pulchra inhibit acylated homoserine lactone (AHL)-mediated gene expression by displacing AHL signal from its receptor protein)

RN 63025-21-8 HCAPLUS
CN 2(5H)-Furanone, 3-[(1R)-1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:745270 HCAPLUS
DOCUMENT NUMBER: 128:34643
TITLE: Reinvestigation of the sulfuric acid-catalyzed cyclization of brominated 2-alkyllevulinic acids to 3-alkyl-5-methylene-2(5H)-furanones
AUTHOR(S): Manny, Anthony J.; Kjelleberg, Staffan; Kumar, Naresh; de Nys, Rocky; **Read, Roger W.**; Steinberg, Peter
CORPORATE SOURCE: Sch. Chem., Sch. Microbiol. Immunol., Sch. Biol. Sci.,

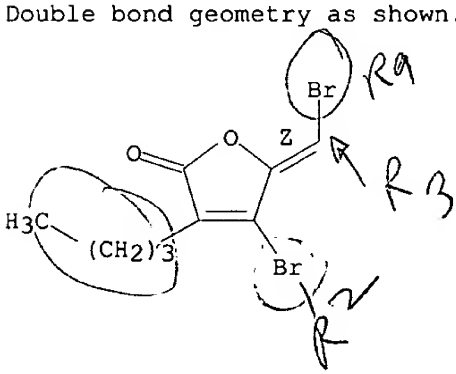
Univ. New South Wales, Sydney, NSW 2052, Australia
SOURCE: Tetrahedron (1997), 53(46), 15813-15826
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A synthesis of ethyl-, butyl-, hexyl- and dodecyl-substituted fimbrolide derivs. from (alkyl)levulinic acid derivs. through bromination and acid promoted lactonization was described. The underlying reactions were investigated using levulinic acid as a model, and the effects of varying the bromination conditions and changing acid concn. on product distribution are discussed. Dibromination proceeded best in CHCl3 and proceeded in EtOH-free CHCl3 without the complication of ester formation. Cyclization occurs with concomitant oxidn. in 98-100% H2SO4 but gave highest yields of fimbrolide derivs. in 100% H2SO4. The formation of related beckerelide substances is also described.

IT **63025-35-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(fimbrolide; prepn. of alkyl(methylene)furanones via lactonization of bromo(alkyl)levulinate derivs.)

RN 63025-35-4 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-butyl-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



=> d his

(FILE 'HOME' ENTERED AT 03:49:07 ON 01 JUL 2002)

FILE 'REGISTRY' ENTERED AT 03:49:14 ON 01 JUL 2002
L1 STRUCTURE UPLOADED
L2 1 S L1
L3 79 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 03:49:50 ON 01 JUL 2002
L4 43 S L3
L5 25 S L4 AND PD < MAY 1998
L6 5 S L4 AND READ, R?/AU

=> s l5 not l6

L7 24 L5 NOT L6

=> d l7, ibib abs fhitstr, 1-24

L7 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:178623 HCAPLUS
DOCUMENT NUMBER: 128:241398
TITLE: A new method for determining surface concentrations of
marine natural products on seaweeds
AUTHOR(S): De Nys, R.; Dworjanyn, S. A.; Steinberg, P. D.
CORPORATE SOURCE: School Biological Science, University New South Wales,
Sydney, 2052, Australia
SOURCE: Marine Ecology: Progress Series (**1998**), 162, 79-87
CODEN: MESEDT; ISSN: 0171-8630
PUBLISHER: Inter-Research
DOCUMENT TYPE: Journal
LANGUAGE: English

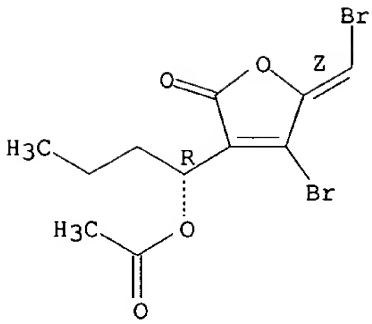
AB A new technique is described for detg. the concn. of natural products on the surface of marine algae. Surface metabolites were quantified for 2 red algae, Delisea pulchra and Laurencia obtusa, by dipping the algae in hexane for 20-40 s at room temp. More stringent extn. procedures using other solvents or longer extn. times in hexane (>50 s) caused cell damage.

Natural products in the surface exts. were measured using GS/MS. Mean total surface concn. of natural products from D. pulchra were 250 ng/cm2, but <1 ng/cm2 for L. obtusa. These results contrast to whole plant levels of total secondary metabolites in the 2 algae, which were higher in L. obtusa (7 .mu.g/mg dry wt.) than in D. pulchra (3.4 .mu.g/mg). Dipping thalli in hexane for 30 s also caused no cell lysis in 8 other species of macroalgae. It is suggested that the procedure is more broadly applicable for the quantification of non-polar surface metabolites on seaweeds and other organisms with resistant surface cells.

IT **63025-21-8**
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(method for detg. surface concns. of marine natural products on seaweeds)

RN 63025-21-8 HCAPLUS
CN 2(5H)-Furanone, 3-[(1R)-1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L7 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:54252 HCAPLUS
DOCUMENT NUMBER: 128:177944
TITLE: Extracellular signal molecule(s) involved in the carbon starvation response of marine Vibrio sp. strain S14
AUTHOR(S): Srinivasan, Sujatha; Ostling, Jorgen; Charlton, Timothy; De Nys, Rocky; Takayama, Kathy; Kjelleberg, Staffan
CORPORATE SOURCE: School of Microbiology and Immunology, University of New South Wales, Sydney, 2052, Australia
SOURCE: Journal of Bacteriology (**1998**), 180(2), 201-209
CODEN: JOBAAY; ISSN: 0021-9193
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

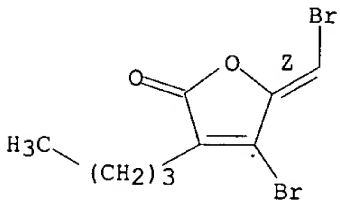
AB The role of exogenous metabolites as putative signal mols. mediating and/or regulating the carbon starvation adaptation program in Vibrio sp. strain S14 was investigated. Addn. of the stationary-phase supernatant ext. (SSE) of Vibrio sp. strain S14 to logarithmic-phase cells resulted in a significant no. of carbon starvation-induced proteins being up-regulated. Halogenated furanones, putative antagonists of acylated homoserine lactones (AHLs), inhibited the synthesis of proteins specifically induced upon carbon starvation. The effect of the furanone was the opposite of that caused by SSE with respect to the up- and down-regulation of protein expression, indicating that both the furanone and the putative signalling mols. were acting on the same regulatory pathway. Culturability was rapidly lost when Vibrio sp. strain S14 was starved in the presence of the furanone at a low concn. The furanone also had a neg. effect on the ability of carbon-starved cells to mount resistance against UV irradn. and hydrogen peroxide exposure. The SSE of Vibrio sp. strain S14 had the ability to provide cross-protection against the loss in viability caused by the furanone. We have further demonstrated that the SSE taken from low- as well as high-cell-d. cultures of Vibrio sp. strain S14 induced luminescence in Vibrio harveyi. Taken together, the results in this report provide evidence that Vibrio sp.

strain S14 produces extracellular signalling metabolites during carbon and energy starvation and that these mols. play an important role in the expression of proteins crucial to the development of starvation- and stress-resistant phenotypes.

IT **63025-35-4**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(inhibitor; extracellular signal mol.(s) involved in the carbon starvation response of marine Vibrio S14)

RN 63025-35-4 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-butyl-, (5Z)- (9CI) (CA INDEX NAME)

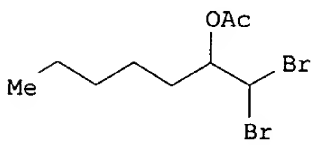
Double bond geometry as shown.



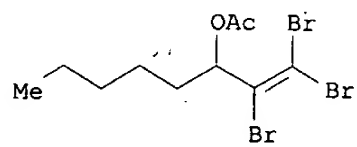
L7 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:	1997:164893 HCAPLUS
DOCUMENT NUMBER:	126:141818
TITLE:	New Acetyl Derivatives from Antarctic Delisea fimbriata
AUTHOR(S):	Cueto, Mercedes; Darias, Jose; San-Martin, Aurelio; Rovirosa, Juana
CORPORATE SOURCE:	Instituto de Productos Naturales y Agrobiologia de Canarias, CSIC. Avda. Astrofisico Fco. Sanchez 3, La Laguna, 38206, Spain
SOURCE:	Journal of Natural Products (**1997**), 60(3), 279-281 CODEN: JNPRDF; ISSN: 0163-3864
PUBLISHER:	American Chemical Society
DOCUMENT TYPE:	Journal
LANGUAGE:	English
GI	

QH1.L94



I



II

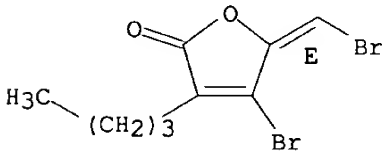
AB Compds. with three characteristic skeletons of members of the family Bonnemaisoneaceae were found to coexist in the alga Delisea fimbriata. The two new acetates I and II were also isolated; this is the first isolation of acetates from this genus. The structures, chem. transformation, and biogenetic significance of I and II are described.

IT **63025-34-3**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(from Antarctic Delisea fimbriata)

RN 63025-34-3 HCAPLUS

CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-butyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L7 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:731975 HCAPLUS

DOCUMENT NUMBER: 126:4540

TITLE: Methods for microbial regulation

INVENTOR(S): Kjelleberg, Staffan; Steinberg, Peter; De, Nys Peter Canisius; Maximilien, Ria; Manefield, Michael; Givskov, Michael; Gram, Lone

PATENT ASSIGNEE(S): Unisearch Limited, Australia

SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9629392	A1	19960926	WO 1996-AU167	19960325	<--
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI					
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN					
CA 2215797	AA	19960926	CA 1996-2215797	19960325	<--
AU 9649996	A1	19961008	AU 1996-49996	19960325	<--
AU 708962	B2	19990819			
EP 815201	A1	19980107	EP 1996-906677	19960325	<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					

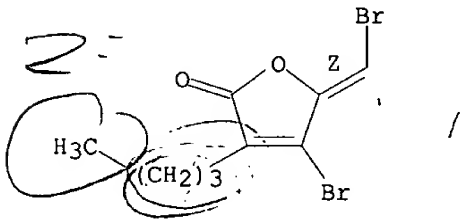
BR 9607661	A	19980616	BR 1996-7661		19960325
CN 1185173	A	19980617	CN 1996-194117		19960325
JP 11502108	T2	19990223	JP 1996-527912		19960325
US 2002037578	A1	20020328	US 1998-913762		19980304
PRIORITY APPLN. INFO.:			AU 1995-1912	A	19950323
			WO 1996-AU167	W	19960325

AB A method and microbial culture medium for inhibiting homoserine lactone- and/or acylated homoserine lactone-regulated processes in microorganisms using furanone compds. derived from Delisea pulchra or their chem. derivs.
are claimed.

IT **63025-35-4**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(homoserine lactone- and/or acylated homoserine lactone-regulated processes in microorganisms inhibition by furanone derivs.)

RN 63025-35-4 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-butyl-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L7 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:	1996:666226 HCAPLUS
DOCUMENT NUMBER:	125:296978
TITLE:	Inhibitory effects of secondary metabolites from the red alga Delisea pulchra on swarming motility of Proteus mirabilis
AUTHOR(S):	Gram, Lone; De Nys, Rocky; Maximilien, Ria; Givskov, Michael; Steinberg, Peter; Kjelleberg, Staffan
CORPORATE SOURCE:	Sch. Microbiology and Immunology, Sch. Biolog. Sci., Univ. New South Wales, Australia
SOURCE:	Appl. Environ. Microbiol. (**1996**), 62(11), 4284-4287 CODEN: AEMIDF; ISSN: 0099-2240
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB Abnormal, uncoordinated swarming motility of the opportunistic human pathogen Proteus mirabilis was seen when a crude ext. of the Australian red alga D. pulchra was added to the medium. This occurred at concns. at which growth rate, swimming motility, cell elongation, polynucleation, and
hyperflagellation were not affected. One halogenated furanone from D. pulchra inhibited swarming motility at concns. that did not affect growth

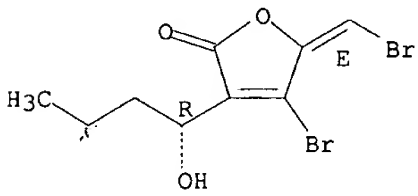
rate and swimming motility. Other structurally similar D. pulchra furanones had no effect on swarming, suggesting considerable specificity in the effects of furanones on swarming motility by P. mirabilis.

IT **63025-27-4**
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(inhibitory effect of furanone from red alga Delisea pulchra on swarming motility of Proteus mirabilis)

RN 63025-27-4 HCAPLUS

CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-(1-hydroxybutyl)-, [R-(E)]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



102

L7 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:224398 HCAPLUS

DOCUMENT NUMBER: 124:284644

TITLE: Quantitative variation of secondary metabolites in the sea hare Aplysia parvula and its host plant, Delisea pulchra

AUTHOR(S): Nys, Rocky de; Steinberg, Peter D.; Rogers, Cary N.; Charlton, Timothy S.; Duncan, Mark W.

CORPORATE SOURCE: School Biological Science, University New South Wales, Sydney, 2052, Australia

SOURCE: Mar. Ecol.: Prog. Ser. (**1996**), 130(1 to 3), 135-46
CODEN: MESEDT; ISSN: 0171-8630

DOCUMENT TYPE: Journal

LANGUAGE: English

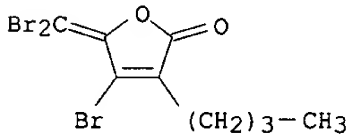
AB The authors measured quant. variation of structurally similar halogenated furanones in the sea hare Aplysia parvula (Opisthobranchia; Anaspidea) and in its host alga Delisea pulchra (Rhodophyta; Bonnemaisonales). Mean total levels of furanones from D. pulchra in A. parvula were 13.3% of the dry wt. of the sea hares, with one metabolite comprising on av. 86% of the total metabolite load of the sea hares. Levels of furanones in the sea hares were highest in the digestive gland but were also found in other tissues, including the skin in at least mg g-1 (dry wt.) levels. Metabolite levels in the skin of the sea hares did not differ from those in D. pulchra (typically between 5 and 10 mg g-1 dry wt.). Variation of metabolites in D. pulchra on the scale of both meters and kilometers was low and only minor variation in levels of individual metabolites was obsd.

There was significant variation in levels of metabolites within plants, with concns. generally higher at the distal end of the thallus. The large differences in metabolite concns. on a scale of mm found in some other red algae were not obsd. in D. pulchra. Metabolites occurred in significantly different relative amts. in A. parvula vs. D. pulchra, with concns. of individual metabolites in A. parvula ranging between 0 and 83 times the concns. found in host algae. These results show that the sea hares differentially bioaccumulate algal metabolites. However, only 1 metabolite was enhanced in concn. in the sea hares relative to the alga. This metabolite was the most abundant compd. in the animals, and has been previously shown to be effective as a predator deterrent. A second metabolite, which was not effective as a predator deterrent in A. parvula, decreased in relative concn. in the animals. In contrast to recent suggestions in the literature for sequestered algal metabolites in sea hares, the results indicate that the distribution and level of D. pulchra metabolites in A. parvula are consistent with a role as acquired chem. defenses against predators.

IT **63025-36-5**
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(variation of halogenated furanone secondary metabolites in sea hare and its host plant, Delisea pulchra)

RN 63025-36-5 HCAPLUS

CN 2(5H)-Furanone, 4-bromo-3-butyl-5-(dibromomethylene)- (9CI) (CA INDEX NAME)



L7 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:196774 HCAPLUS
DOCUMENT NUMBER: 124:234956
TITLE: Antifouling marine compositions of furanone compounds
INVENTOR(S): Steinberg, Peter David; De Nys, Peter Canisius
PATENT ASSIGNEE(S): Unisearch Ltd., Australia
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9601294	A1	19960118	WO 1995-AU407	19950705 <--

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,

GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

CA 2192955	AA	19960118	CA 1995-2192955	19950705	<--
AU 9528750	A1	19960125	AU 1995-28750	19950705	<--
AU 688535	B2	19980312			
EP 769039	A1	19970423	EP 1995-924107	19950705	<--
EP 769039	B1	20000927			

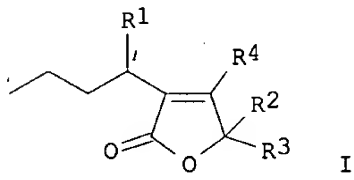
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

CN 1156471	A	19970806	CN 1995-194788	19950705	<--
CN 1047785	B	19991229			
JP 10502402	T2	19980303	JP 1995-503579	19950705	<--
AT 196643	E	20001015	AT 1995-924107	19950705	
ES 2151962	T3	20010116	ES 1995-924107	19950705	
US 6060046	A	20000509	US 1997-765226	19970218	

PRIORITY APPLN. INFO.: AU 1994-6666 A 19940706
WO 1995-AU407 W 19950705

OTHER SOURCE(S): MARPAT 124:234956

GI



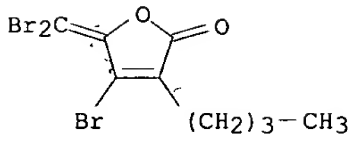
I

AB An antifouling compn. comprises an effective amt. of a furanone compd. I (R1, R2 and R3 = H, OH, C1-10-alkyl, an ether group contg. from 1-10 C atoms or R2 and R3 together may comprise an unsubstituted or a halogenated alkene contg. from 1-10 C atoms; and R4 = a H or halogen atom), and a suitable carrier. I (R1 = H, R2-3 = Br) (10 .mu.g/mL in DMSO) inhibited settlement of barnacle by 50%, relative to control (without antifoulant).

IT **63025-36-5**
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(antifouling marine compns. of (substituted) Bu furanone compds.)

RN 63025-36-5 HCAPLUS

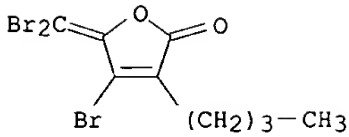
CN 2(5H)-Furanone, 4-bromo-3-butyl-5-(dibromomethylene)- (9CI) (CA INDEX NAME)



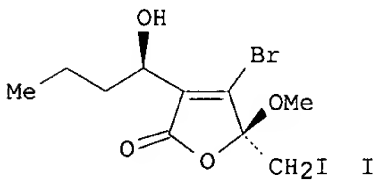
L7 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:789666 HCAPLUS
DOCUMENT NUMBER: 123:281148
TITLE: Broad spectrum effects of secondary metabolites from the red alga Delisea pulchra in antifouling assays.
AUTHOR(S): De Nys, R; Steinberg, P D; Willemsen, P; Dworjanyn, S A; Gabelish, C L; King, R J
CORPORATE SOURCE: School of Biological Science, University of New South Wales, Sydney, 2052, Australia
SOURCE: Biofouling (**1995**), 8(4), 259-71
CODEN: BFOUEC; ISSN: 0892-7014
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In this study the antifouling activity was investigated of a series of chem.-related, halogenated furanones, isolated from D. pulchra, a red alga which is rarely fouled in the field. The metabolites were tested in lab. assays against the barnacle Balanus amphitrite amphitrite, the alga Ulva lactuca and a marine bacterium (strain SW 8). Settlement of barnacle cyprid larvae was strongly inhibited, with an EC50 < 25 ng.cntdot.mL-1 (25 ppb) for some compds. The settlement and growth of algal gametes was also strongly inhibited, in some cases at concns. as low as 25 ng.cntdot.cm-2. Growth of the marine bacterium SW8 was inhibited more strongly than by the common antibiotic gentamicin. Activity of the D. pulchra metabolites was comparable to that of the heavy metals and biocides currently used in antifouling paints. However, no single compd. was most active in all tests and some metabolites effective against one organism showed little or no activity against the others. The high, but variable level of activity of the D. pulchra metabolites, coupled with their small size, relative stability, and ability to be synthesized, suggest their potential use as active ingredients in antifouling coatings.

IT **63025-36-5P**
RL: BAC (Biological activity or effector, except adverse); MFM (Metabolic formation); PUR (Purification or recovery); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(Delisea pulchra metabolite as antifouling agent)
RN 63025-36-5 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-3-butyl-5-(dibromomethylene)- (9CI) (CA INDEX NAME)



L7 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:609886 HCAPLUS
DOCUMENT NUMBER: 123:32846
TITLE: Determination of the absolute configuration of a series of halogenated furanones from the marine alga Delisea pulchra
AUTHOR(S): Koenig, Gabriele M.; Wright, Anthony D.
CORPORATE SOURCE: Dep. Pharmacy, Swiss Fed. Inst. Technology (ETH), Zurich, CH-8057, Switz.
SOURCE: Helv. Chim. Acta (**1995**), 78(3), 758-64
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

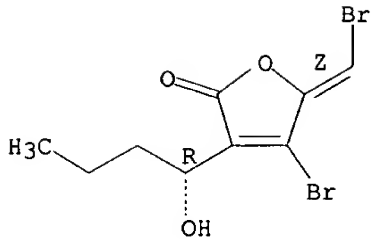


AB The abs. configuration of a series of naturally occurring and semi-synthetic halogenated furanones, e.g., I, is proposed on the basis of chem. interconversions and X-ray and CD analyses. The CD analyses clearly reveal that the presence of the allylic O-atom has a strong influence in detg. the sign and intensity of the low energy .pi..fwdarw..pi.* transition.

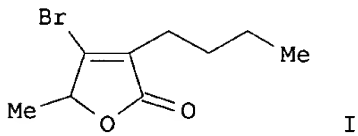
IT **63025-28-5**
RL: RCT (Reactant)
(abs. configuration of marine alga halogenated furanones)

RN 63025-28-5 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-[(1R)-1-hydroxybutyl]-, (5Z)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L7 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:433719 HCAPLUS
DOCUMENT NUMBER: 122:239428
TITLE: Easy Access to 5-Alkyl-4-bromo-2(5H)-furanones: Synthesis of a Fimbrolide, an Acetoxyfimbrolide, and Bromobeckerelide
AUTHOR(S): de March, Pedro; Font, Josep; Gracia, Antonio; Qingying, Zheng
CORPORATE SOURCE: Unitat de Quimica Organica, Universitat Autonoma de Barcelona, Bellaterra, 08193, Spain
SOURCE: J. Org. Chem. (**1995**), 60(6), 1814-22
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

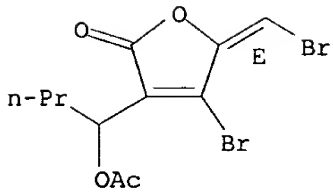
AB Treatment of .gamma.-monosubstituted allenic esters, e.g., MeCH:C:C(CO2Me)Bu, with N-bromosuccinimide in water yields 5-alkyl-4-bromo-2(5H)-furanones, e.g., I, that can be transformed into 5-alkylidene-4-bromo-2(5H)-furanones in good overall yields. Starting with a simple allenic ester these transformations have been applied to a new synthesis of fimbrolide, acetoxyfimbrolide, and bromobeckerelide.

IT **162426-33-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of alkylbromofuranones and access to fimbrolide, acetoxyfimbrolide, and bromobeckerelide)

RN 162426-33-7 HCAPLUS

CN 2(5H)-Furanone, 3-[1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, (E)-(9CI) (CA INDEX NAME)

Double bond geometry as shown.

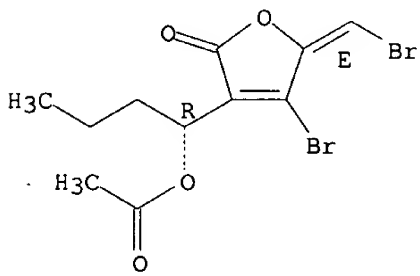


L7 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:49751 HCAPLUS
DOCUMENT NUMBER: 120:49751
TITLE: New halogenated furanones from the marine alga Delisea
pulchra (cf. fimbriata)
AUTHOR(S): de Nys, Rocky; Wright, Anthony D.; Konig, Gabriele M.;
Sticher, Otto
CORPORATE SOURCE: Dep. Pharm., Swiss Fed. Inst. Technol., Zurich, CH-8057, Switz.
SOURCE: Tetrahedron (**1993**), 49(48), 11213-20
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An investigation of the natural products of the red alga D. pulchra, collected from the Cape Banks, New South Wales, Australia, yielded eight new polyhalogenated furanones and previously reported metabolites. The structures of the new compds. were detd. from the interpretation of their 1D and 2D NMR, UV, IR and mass spectral data. For the first time, complete 1H and 13C NMR data for 6 of the previously isolated compds. are reported.

IT **63025-20-7**
RL: BIOL (Biological study)
(from Delisea pulchra)
RN 63025-20-7 HCAPLUS
CN 2(5H)-Furanone, 3-[1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, [R-(E)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L7 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2002 ACS

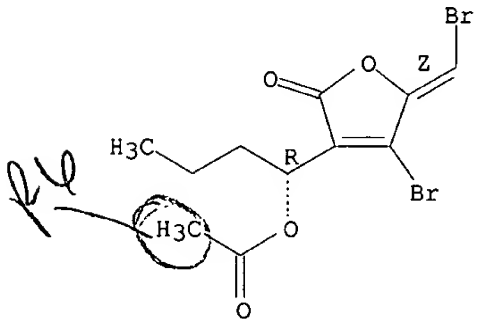
ACCESSION NUMBER: 1993:55719 HCAPLUS
DOCUMENT NUMBER: 118:55719
TITLE: Delisea pulchra (cf. fimbriata) revisited. The structural determination of two new metabolites from the red alga Delisea pulchra
AUTHOR(S): De Nys, Rocky; Coll, John C.; Bowden, Bruce F.
CORPORATE SOURCE: Dep. Chem. Biochem., James Cook Univ., Townsville, 4811, Australia
SOURCE: Aust. J. Chem. (**1992**), 45(10), 1625-32
CODEN: AJCHAS; ISSN: 0004-9425
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Two new metabolites, 1,1,3-tribromododecenol and 6-acetoxy-1,1,2-tribromooctenone, were isolated from D. pulchra. Five previously reported metabolites were also isolated, and the full NMR characterization of 3 fimbrolides is reported for the first time.

IT **63025-21-8**
RL: BIOL (Biological study)
(from Delisea pulchra)

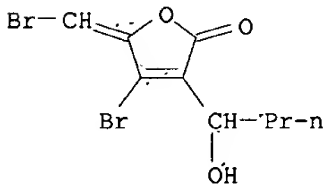
RN 63025-21-8 HCAPLUS
CN 2(5H)-Furanone, 3-[(1R)-1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

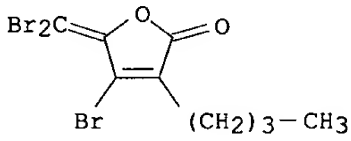


L7 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:511367 HCAPLUS
DOCUMENT NUMBER: 117:111367
TITLE: Bromine addition to .alpha.-(1-hydroxyalkyl)- and .alpha.-(1-alkoxyalkyl)-.alpha.,.beta.-unsaturated esters: an approach to hydroxyfimbrolide and bromobeckerelide
AUTHOR(S): Calderon, Angel; Font, Josep; De March, Pedro
CORPORATE SOURCE: Unitat Quim. Org., Univ. Auton. Barcelona, Bellaterra, 08193, Spain
SOURCE: Tetrahedron (**1992**), 48(25), 5347-58
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal

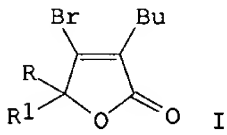
LANGUAGE: English
AB Conventional ionic bromination of electron-poor olefins, RO2CC(:CH2)CH(OR1)Pr (R = Me, Et; R1 = H, Me, CH2OCH2CH2OMe) and Me (E)-2-(1-hydroxyethyl)-2-butenoate, proceeds with yields >80%. Treatment of (E)-BrCH:C(CO2H)CHPrOCH2OCH2CH2OMe with two equiv. of strong bases, a reaction related to a possible hydroxyfimbrolide and bromobeckerlide synthesis, resulted in the halogen-metal exchange reaction affording CH2:C(CO2H)CHPrOCH2OCH2CH2OMe, presumably through the generation of a dianion.
IT **143140-80-1**
RL: RCT (Reactant)
(bromohydroxyalkenoate intermediates for, prepn. of)
RN 143140-80-1 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-(1-hydroxybutyl)- (9CI) (CA INDEX NAME)



L7 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1988:489737 HCAPLUS
DOCUMENT NUMBER: 109:89737
TITLE: Novel 2(5H)-furanones from the red marine alga Delisea elegans (Lamouroux)
AUTHOR(S): McCombs, John D.; Blunt, John W.; Chambers, Mark V.; Munro, Murray H. G.; Robinson, Ward T.
CORPORATE SOURCE: Dep. Chem., Univ. Canterbury, Christchurch, N. Z.
SOURCE: Tetrahedron (1988), 44(5), 1489-502
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 109:89737
AB Six novel 2(5H)-furanones, all related to the previously reported fimbrolide (3-butyl-4-bromo-5-(dibromomethylidine)-2(5H)-furanone), have been isolated from the red marine alga D. elegans (family Bonnemaisoniaceae). Three of the six compds., characterized by spectroscopic and single crystal x-ray structure analyses, contain unusual poly-brominated cyclobutane functions.
IT **63025-36-5**
RL: BIOL (Biological study)
(from Delisea elegans)
RN 63025-36-5 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-3-butyl-5-(dibromomethylene)- (9CI) (CA INDEX NAME)



L7 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:406140 HCAPLUS
DOCUMENT NUMBER: 103:6140
TITLE: A new synthesis of 3-n-butyl-4-bromo-5(Z)-bromomethylidene-2(5H)-furanone, a naturally occurring fimbrolide from Delisia fimbriata (Bonnemaisoniaceae)
AUTHOR(S): Caine, Drury; Ukachukwu, Victoria C.
CORPORATE SOURCE: Sch. Chem., Georgia Inst. Technol., Atlanta, GA, 30332, USA
SOURCE: J. Org. Chem. (**1985**), 50(12), 2195-8
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 103:6140
GI



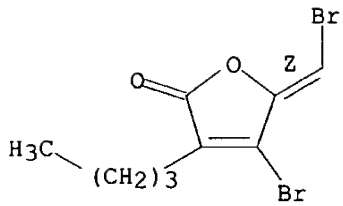
I

AB The title compd. (I, RR1 = Z-CHBr)(II) was prepd. by addn. of BrLiC:CBuCO2Li (III), prepd. by metalation of BrCH:CBuCO2H, to Ac2O to give I (R = Me, R1 = OH). Dehydration of the latter compd. with P2O5 gave I (RR1 = CH2), which was brominated with Br followed by dehydrobromination with DBU to give II in 41% overall yield. Addn. of III to Cl3CCHO gave I (R = CCl3, R1 = H) which was dehydrochlorinated with DBU to give I (RR1 = CCl2) in 55% overall yield.

IT **63025-35-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 63025-35-4 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-butyl-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L7 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1983:600391 HCAPLUS
DOCUMENT NUMBER: 99:200391
TITLE: Antimicrobial constituents [of marine algae]
AUTHOR(S): Ochi, Masamitsu
CORPORATE SOURCE: Fac. Sci., Kochi Univ., Kochi, Japan
SOURCE: Suisangaku Shiriizu (**1983**), 45(Kaiso no Seikagaku to Riyo), 101-19
CODEN: SUSHDC
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

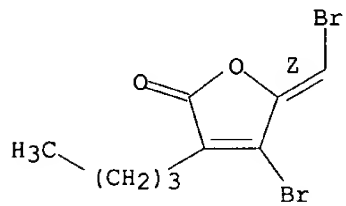
AB Antimicrobial substances were isolated from a wide variety (131 strains) of seaweeds growing along the coast of Japan. The antimicrobial activities of the compds. against Staphylococcus aureus, Bacillus subtilis, Escherichia coli, Saccharomyces cerevisiae, etc. were shown.

IT **63025-35-4**
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(of seaweed, antimicrobial activity of)

RN 63025-35-4 HCAPLUS

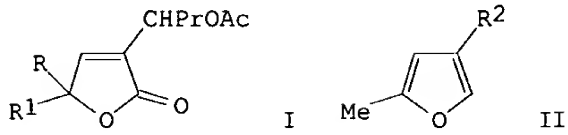
CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-butyl-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L7 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1983:539591 HCAPLUS
DOCUMENT NUMBER: 99:139591
TITLE: Efficient synthesis of acetoxyfimbrolides and beckerelide analogs
AUTHOR(S): Kotsuki, Hiyoshizo; Monden, Mitsugu; Ochi, Masamitsu
CORPORATE SOURCE: Fac. Sci., Kochi Univ., Kochi, 780, Japan
SOURCE: Chem. Lett. (**1983**), (7), 1007-8
CODEN: CMLTAG; ISSN: 0366-7022

DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I II

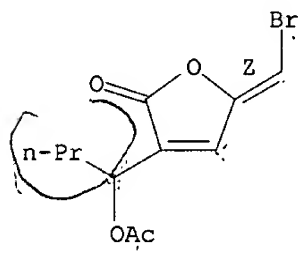
AB The title compds. I (RR1 = CH2, CHBr) were prepd. from II (R2 = CHO) by Grignard reaction with PrI, 3-ClC6H4CO2OH oxidn. of II (R2 = CHPrOAc), dehydration of I (R = Me, R1 = OH) with P2O5, and bromination. I (RR1 = CH2, CHBr) had a min. inhibitory concn. against Aspergillus niger of 50 and 25 .mu.g/mL resp., whereas I (R = Me, R1 = OH) was inactive.

IT **87241-09-6P**
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and fungicidal activity of)

RN 87241-09-6 HCAPLUS

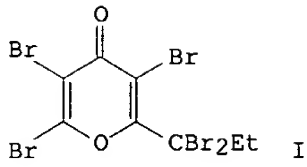
CN 2(5H)-Furanone, 3-[1-(acetyloxy)butyl]-5-(bromomethylene)-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L7 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1980:508527 HCAPLUS
DOCUMENT NUMBER: 93:108527
TITLE: Marine natural products affecting neurotransmission
AUTHOR(S): Taylor, K. M.; Spence, I.
CORPORATE SOURCE: Roche Res. Inst. Mar. Pharmacol., Dee Why, 2099, Australia
SOURCE: Neurotoxins: Fundam. Clin. Adv., [Int. Conf.] (**1979**), 85-93. Editor(s): Chubb, I. W.; Geffen, L. B. Adelaide Univ. Union Press: Adelaide, Australia.
CODEN: 43IFAS
DOCUMENT TYPE: Conference
LANGUAGE: English

GI



I

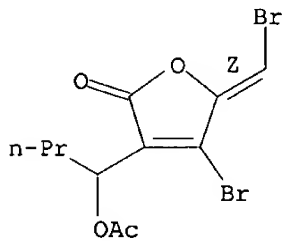
AB Conus geographus Crude venom caused a reversible block of muscle excitability and decreased neuromuscular transmission in the phrenic nerve-diaphragm prepn.; these activities were due to 3 polypeptide present in the crude venom. Marine substances, e.g. furanoquinol [65557-84-8], pentabromopropylpyrone (I) [69267-70-5], acetoxyfimbrolide [**74365-48-3**], and aminooxyacetic acied [471-47-6], were potent inhibitors of GABA [56-12-2] neurochem. processes, but their specificity was limited, esp. by their inhibitory effects on mitochondrial respiration. Polyhalogenated monoterpenes isolated from red algae had central nervous system depressant activity in animals. The exception was Plocamadiene A [66321-25-3] isolated from Plocamium cartilagineum which caused a reversible spastic paresis in mice. The severe muscle spasm was antagonized by diazepam [439-14-5].

IT **74365-48-3**
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(neurochem. activity and toxicity of)

RN 74365-48-3 HCAPLUS

CN 2(5H)-Furanone, 3-[1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L7 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1980:431673 HCAPLUS

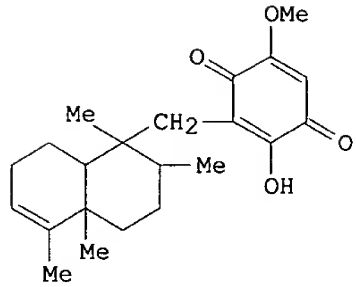
DOCUMENT NUMBER: 93:31673

TITLE: Potent inhibition of oxidative phosphorylation by marine natural products

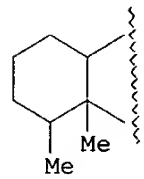
AUTHOR(S): Jamieson, Dana D.; De Rome, Paul J.; Taylor, Kenneth M.

CORPORATE SOURCE: Roche Res. Inst. Mar. Pharmacol., Dee Why, 2099, Australia

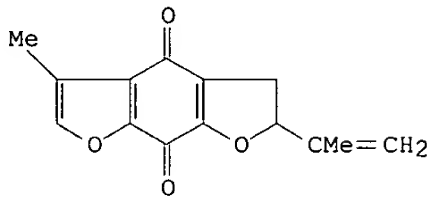
SOURCE: J. Pharm. Sci. (**1980**), 69(4), 462-5
CODEN: JPMSAE; ISSN: 0022-3549
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I



II



III

AB Many lipid-sol. exts. from various marine organisms have a nonspecific depressant effect on smooth muscle contractions. Novel compds. isolated from such lipid-sol. exts. were tested for their effects on the respiration of rat liver mitochondria and produced potent stimulation or inhibition of oxygen uptake by the mitochondria. Isospongiaquinone (I) [69672-66-8] and dihydroisospongiaquinone (II) [69672-74-8], extd. from sponge, produced .apprx.50% inhibition of State 3 respiration at 1 .mu.M; at 5.mu.M considerable depression of State 4 respiration was seen. The most potent stimulant of State 4 respiration was dihydrocyperaquinone (III) [27304-02-5], which approx. doubled State 4 respiration at 4 .mu.M.

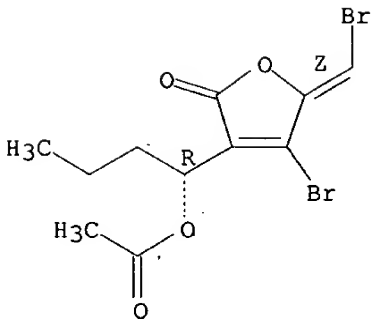
Other compds. such as costatol [63023-57-4], heterocladol [65746-13-6], and acetoxyimbrolide [**63025-21-8**] showed mixed stimulation of State 4 and inhibition of State 3 respiration.

IT **63025-21-8**
RL: BIOL (Biological study)
(of red algae, oxidative phosphorylation in relation to)

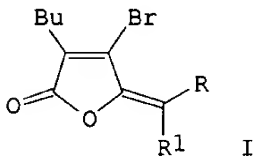
RN 63025-21-8 HCAPLUS

CN 2(5H)-Furanone, 3-[(1R)-1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, (5Z)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



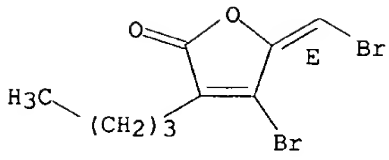
L7 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1979:592772 HCAPLUS
DOCUMENT NUMBER: 91:192772
TITLE: The first synthesis of fimbrolides, a novel class of halogenated lactones naturally occurring in the red seaweed Delisea fimbriata (Bonnemaisoniaceae)
AUTHOR(S): Beechan, Curtis M.; Sims, James J.
CORPORATE SOURCE: Dep. Plant Pathol., Univ. California, Riverside, CA, USA
SOURCE: Tetrahedron Lett. (**1979**), (19), 1649-52
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



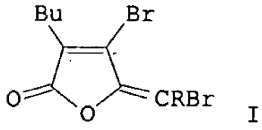
I

AB BuCHBrCO2Et on sequential condensation reaction with MeCOCH2CO2Et, hydrolysis, thermal decarboxylation and bromination gave HO2CCHBuCHBrCOCH2Br, which on treatment with 100% H2SO4 at 100.degree. underwent intramol. cyclocondensation reaction to give fimbrolide I (R = H, R1 = Br) together with a very small amt. of I (R = Br, R1 = H).
IT **63025-34-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 63025-34-3 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-5-(bromomethylene)-3-butyl-, (E)- (9CI) (CA INDEX NAME)

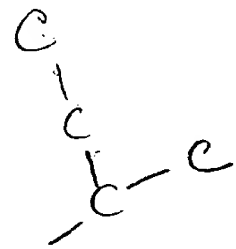
Double bond geometry as shown.



L7 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1978:135794 HCAPLUS
DOCUMENT NUMBER: 88:135794
TITLE: Identification of halogen substituents in natural products by measurement of carbon-13 spin-lattice relaxation times and integrated intensities
AUTHOR(S): Norton, Raymond S.
CORPORATE SOURCE: Roche Res. Inst. Mar. Pharmacol., Dee Why, Aust.
SOURCE: Tetrahedron (**1977**), 33(19), 2577-81
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



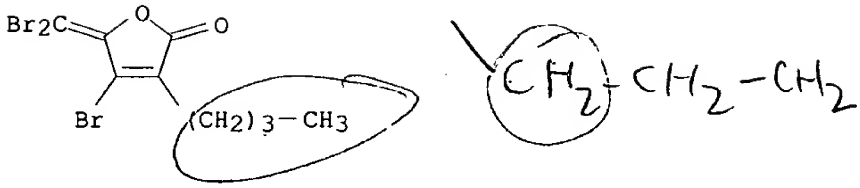
I



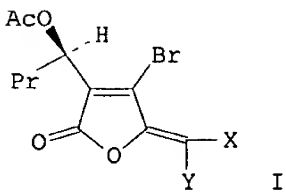
AB A method is proposed for differentiating brominated from chlorinated C atoms by natural-abundance 13C NMR spectroscopy. Spin-lattice relaxation behavior of brominated C atoms is influenced by C-Br scalar interactions, which lead to shortened 13C spin-lattice relaxation times and reduced values of nuclear Overhauser enhancement. C-Cl scalar interactions make a negligible contribution to the spin-lattice relaxation of chlorinated C. These effects were illustrated by measuring the 13C spin-lattice relaxation times and integrated intensities of PhR (R = Cl, Br, iodo), chloro-, bromo- and iodocyclohexane, costatol, costatone and the fimbrolides I (R = Br, H). 13C relaxation measurements can be used to distinguish brominated from chlorinated C in the case of halogenated quaternary C atoms, sp2-hybridized methine C, and some sp3-hybridized methine C.

IT **63025-36-5**
RL: PRP (Properties)
(carbon-13 spin-lattice relaxation and integrated intensities of)
RN 63025-36-5 HCAPLUS
CN 2(5H)-Furanone, 4-bromo-3-butyl-5-(dibromomethylene)- (9CI) (CA INDEX NAME)

102



L7 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1978:3069 HCAPLUS
DOCUMENT NUMBER: 88:3069
TITLE: Natural products from the red seaweed Delisea fimbriata
AUTHOR(S): Sims, J. J.; Pettus, J. A., Jr.; Wing, R. M.
CORPORATE SOURCE: Dep. Chem., Univ. California, Riverside, Calif., USA
SOURCE: NATO Conf. Ser., [Ser.] 4 (1977), 1(Mar. Nat. Prod. Chem.), 205-9
CODEN: NCSFDT
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

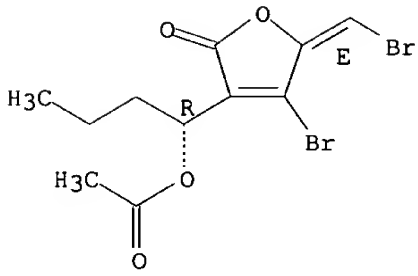


I

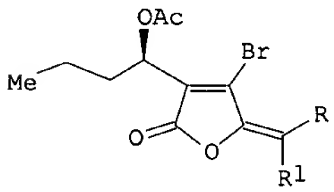
AB The red seaweed D. fimbriata, on extn. with CH2Cl2 and MeOH, yielded 2 fractions, a lactonic fraction and a less polar fraction. The lactone fraction on high pressure liq. chromatog. gave 7 compds. identified by spectral and chem. anal. as I, where X = H, Br, or I and Y = H, Br, Cl, or I. The less polar fraction was sepd. by chromatog. into 5 halogenated ketones (BuCHXCOCY:CBr2, where X = H, Br, or Cl and Y = Br or I). The ketones were identified by synthesis and from spectral data.

IT **63025-20-7**
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(of seaweed)
RN 63025-20-7 HCAPLUS
CN 2(5H)-Furanone, 3-[1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, [R-(E)]- (9CI) (CA INDEX NAME)

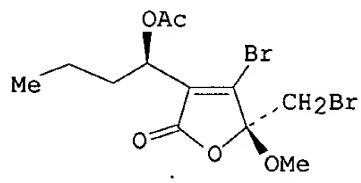
Absolute stereochemistry.
Double bond geometry as shown.



L7 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1977:189143 HCAPLUS
DOCUMENT NUMBER: 86:189143
TITLE: Marine natural products. XII. Isolation of a family of multihalogenated gamma-methylene lactones from the red seaweed Delisea fimbriata
AUTHOR(S): Pettus, John A., Jr.; Wing, Richard M.; Sims, James J.
CORPORATE SOURCE: Dep. Chem., Univ. California, Riverside, Calif., USA
SOURCE: Tetrahedron Lett. (**1977**), (1), 41-4
CODEN: TELEAY
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I



II

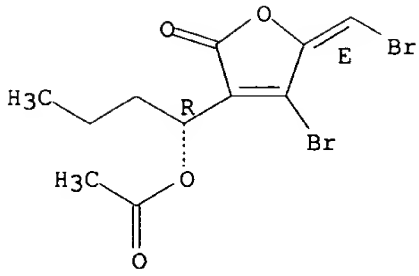
AB The mol. structures of the acetoxyfimbrolides I (R = H, R1 = Br, I, Cl; R = Br, R1 = H, Br; R = I, R1 = H), isolated from the thallus of D. fimbriata, were detd. from spectral data. I (R = H, R1 = Br) with MeOH gave II, the crystal structure of which was detd. by x-ray anal.

IT **63025-20-7P**
RL: PREP (Preparation)
(from Delisea fimbriata, mol. structure of)

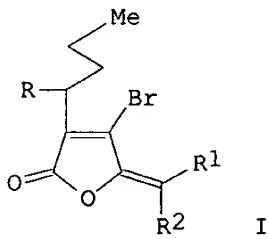
RN 63025-20-7 HCAPLUS

CN 2(5H)-Furanone, 3-[1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, [R-(E)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



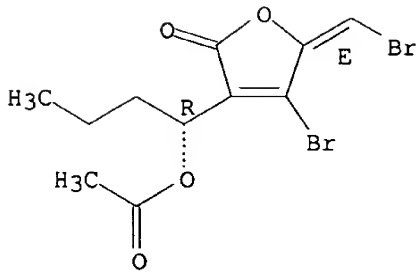
L7 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1977:189142 HCAPLUS
DOCUMENT NUMBER: 86:189142
TITLE: A new class of halogenated lactones from the red alga Delisea fimbriata (Bonnemaisoniaceae)
AUTHOR(S): Kazlauskas, R.; Murphy, P. T.; Quinn, R. J.; Wells, R.
J.
CORPORATE SOURCE: Roche Res. Inst. Mar. Pharmacol., Dee Why, Aust.
SOURCE: Tetrahedron Lett. (1977), (1), 37-40
CODEN: TELEAY
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB The mol. structures of the fimbrolides I (R = OAc, OH, R1 = H, R2 = Br, I,
Cl; R = OAc, OH, R1 = Br, I, Cl, R2 = H; R = OAc, OH, R1 = R2 = Br; R = R2
= H, R1 = Br; R = R1 = H, R2 = Br; R = H, R1 = R2 = Br), isolated from D. fimbriata, were detd. from chem. and spectral data.
IT **63025-20-7P**
RL: PREP (Preparation)
(from Delisea fimbriata, mol. structure of)
RN 63025-20-7 HCAPLUS
CN 2(5H)-Furanone, 3-[1-(acetyloxy)butyl]-4-bromo-5-(bromomethylene)-, [R-(E)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



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L2 1 S L1
L3 79 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 03:49:50 ON 01 JUL 2002
L4 43 S L3

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L5            25 S L4 AND PD < MAY 1998
L6             5 S L4 AND READ, R?/AU
L7            24 S L5 NOT L6

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L8             0 L3

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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